Attorney Docket No.: 6169.200-US PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Liselotte Bjerre Knudsen

Application No.: To be assigned Group Art Unit: To be assigned

Filed: March 7, 2001 Examiner: To be assigned

For: Lowering Serum Lipids

PRELIMINARY AMENDMENT

Commissioner for Patents
Washington, DC 20231

Sir:

Prior to examination of the above-identified application on the merits, kindly amend the application as set forth below.

IN THE SPECIFICATION:

At page 1, after the title, insert

--CROSS-REFERENCE TO RELATED APPLICATIONS

This application claims priority under 35 U.S.C. 119 of Danish application no. PA 2000 00375 filed on March 8, 2000, and U.S. provisional application no. 60/191,593 filed on March 20, 2000, the contents of which are fully incorporated herein by reference.--

On page 12, at the end of line 31, please insert --(SEQ ID NO: 1)--.

On page 22, at the end of line 11, please insert --(SEQ ID NO: 1)--.

IN THE ABSTRACT:

Please insert the abstract, which is attached herewith on a separate sheet.

IN THE CLAIMS:

Cancel claims 1-25 without prejudice or disclaimer.

Add new claims 26-41 reading as follows:

--26. A method for lowering one or more serum lipids in a patient in need of such treatment, said method comprising administering to said patient a lipid-lowering effective amount of a GLP-1 agonist.--

--27. A method as defined in claim 26, wherein said one or more serum lipids are selected from the group consisting of: low density lipoprotein (LDL); small, dense LDL; very low density lipoprotein (VLDL); triglycerides; free fatty acids; cholesterol; and high-density lipoprotein (HDL).

--28. A method as defined in claim 26, wherein said GLP-1 agonist is selected from the group consisting of Arg^{26}, Lys^{34}(N-ε-(γ-Glu(N-α-hexadecanoyl)))-GLP-1(7-37), Arg^{34}, Lys^{26}(N-ε-(γ-Glu(N-α-hexadecanoyl)))-GLP-1(7-37), exendin-3, exendin-4, Val^{8}-GLP-1(7-37), Thr^{8}-GLP-1(7-37), Met^{8}- GLP-1(7-37), and Gly^{8}-GLP-1(7-37).--

--29. A method as defined in claim 26, wherein said GLP-1 agonist binds to a GLP-1 receptor with an affinity constant (Kd) below 1 μM.--

--30. A method as defined in claim 26, further comprising administering to said patient a compound selected from the group consisting of growth hormone, a growth hormone releasing agent, prolactin, and placental lactogen, under conditions effective for said reduction.--

--31. A method as defined in claim 26, further comprising administering to said patient a non-GLI-1 agonist antihyperlipidemic agent.--

--32. A method as defined in claim 31, wherein said antihyperlipidemic agent is selected from the group consisting of cholestyramine, colestipol, clofibrate, gemfibrozil, lovastatin, pravastatin, simvastatin, probucol, and dextrothyroxine.--

--33. A method as defined in claim 26, further comprising administering to said patient an antihypertensive-effective amount of an antihypertensive agent selected from the group consisting of β-blockers, calcium channel blockers, and α-blockers.--

--34. A method as defined in claim 26, further comprising administering to said patient an appetite-regulating effective amount of an appetite-regulating agent selected from the group consisting of CART (cocaine amphetamine regulated transcript) agonists, NPY (neuropeptide Y) antagonists, MC4 (melanocortin 4) agonists, orexin antagonists, TNF (tumor necrosis factor) agonists, CRF (corticotropin releasing factor) agonists, CRF BP (corticotropin releasing factor binding protein) antagonists, urocortin agonists, β3 agonists, MSH (melanocyte-stimulating hormone) agonists, MCH (melanocyte-concentrating hormone) antagonists, CCK (cholecystokinin) agonists, serotonin re-uptake inhibitors, serotonin and noradrenaline re-uptake inhibitors, 5HT (serotonin) agonists, bombesin agonists, galanin antagonists, TRH (thyrotropin releasing hormone) agonists, UCP 2 or 3 (uncoupling protein 2 or 3) modulators, leptin agonists, DA (dopamine) agonists (bromocriptin, doprexin), lipase/amylase inhibitors, PPAR modulators, RXR modulators, and TR β agonists.--

--35. A method as defined in claim 26, further comprising administering to said patient an antidiabetic-effective amount of an antidiabetic agent selected from the group consisting of insulin, a sulfonylurea, a biguanide, a thiazolidinedione, an α-glucosidase inhibitor, and an insulin sensitizer.--

--36. A method as defined in claim 26, wherein said patient suffers from a disease state that is alleviated by lowering serum levels of said one or more lipids. --

--37. A method for reducing the serum LDL:HDL ratio in a patient in need of such treatment, said method comprising administering to said patient a GLP-1 agonist in an amount effective for said reduction.--

--38. A method as defined in claim 37, wherein said GLP-1 agonist is selected from the group consisting of Arg^{26}, Lys^{34}(N-ε-(γ-Glu(N-α-hexadecanoyl)))-GLP-1(7-37), Arg^{34}, Lys^{26}(N-ε-(γ-Glu(N-α-hexadecanoyl)))-GLP-1(7-37), exendin-3, exendin-4, Val^{8}-GLP-1(7-37), Thr^{8}-GLP-1(7-37), Met^{8}- GLP-1(7-37), and Gly^{8}-GLP-1(7-37).--

--39. A method as defined in claim 37, wherein said GLP-1 agonist binds to a GLP-1 receptor with an affinity constant (Kd) below 1 μM.--

--40. A method for reducing the serum level of lipoprotein A (lp(A)) and/or apolipoprotein A (apo(A)) in a patient in need of such treatment, said method comprising administering to said patient a GLP-1 agonist in an amount effective for said reduction.--

--41. A method as defined in claim 40, wherein said GLP-1 agonist is selected from the group consisting of Arg^{26}, Lys^{34}(N-ε-(γ-Glu(N-α-hexadecanoyl)))-GLP-1(7-37), Arg^{34}, Lys^{26}(N-ε-(γ-Glu(N-α-hexadecanoyl)))-GLP-1(7-37), exendin-3, exendin-4, Val^{8}-GLP-1(7-37), Thr^{8}-GLP-1(7-37), Met^{8}- GLP-1(7-37), and Gly^{8}-GLP-1(7-37).--

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--~~41~~. A method as defined in claim 40, wherein said GLP-1 agonist binds to a GLP-1 receptor with an affinity constant (Kd) below 1 μM.--

REMARKS

Entry of this amendment is respectfully requested.

In this amendment, original claims 1-25 are cancelled and new claims 26-41 are presented. Support for the new claims can be found in the specification and original claims. No new matter is added. Accordingly, claims 26-41 are pending and at issue.

This application contains a Sequence Listing. Applicants enclose a 3.5" floppy disk containing the Sequence Listing. The content of the attached paper entitled "SEQUENCE LISTING" and of the accompanying identically labelled diskette is the same.

It is believed that the claims are in condition for allowance, and a determination to that effect is earnestly solicited.

Respectfully submitted,

Date: March 7, 2001

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ABSTRACT OF THE DISCLOSURE

The present invention provides methods for lowering serum lipids in a patient by administering a GLP-1 agonist. The invention is useful for treating diseases that may be alleviated by lowering serum lipid levels, including, e.g., cardiovascular disease and diabetes.